

REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested.

Claims 1 and 10 have been rejected under 35 USC 102(b) as being anticipated by Nagashima (US 4,083,187).

Anticipation requires a single prior art reference that discloses each element of the claim. W.L. Gore & Associates v. Garlock, Inc., 220 U.S.P.Q. 303, 313 (Fed. Cir. 1983), cert. denied 469 U.S. 851 (1984). Additionally, the single prior art reference must disclose each and every element of the claimed invention, arranged as in the claim. Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co., 221 U.S.P.Q. 481, 485 (Fed. Cir. 1984). "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention". Scripps Clinic & Research Foundation v. Genentech Inc., 18 U.S.P.Q.2d 1001, 1010 (Fed. Cir. 1991). "The identical invention must be shown in as complete detail as is contained in the ... claim". Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989):

Claim 1 has been amended to include the features that the container is filled with a highly pressurized fluid in a non-activated state and that the outflow opening is closed in the non-activated state.

Item 6 of the office action stated that atmospheric

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120) from said initial position (AP) into said end position
(EP).

the claims are directed to a gas generator comprising a container filled with fluid under a pressure which is significantly higher than atmospheric pressure. In addition, the patent to Nagashima describes a gas cylinder 21 in which "highly compressed gas" is contained (Nagashima, col. 3, lines 3-4). Claim 1 has been amended to recite similar language which was deemed acceptable language in the past by the USPTO as evidenced by Nagashima.

Nagashima does not disclose a gas generator comprising a container filled with a highly pressurized fluid in a non-activated state and having an outflow opening closed in the non-activated state. In addition, Nagashima does not disclose a piston which is displaceably arranged in the container.

Gas container 21 of Nagashima contains highly pressurized gas but a piston is not located in the container 21. On the other hand, actuator 10 of Nagashima comprises a piston-cylinder unit 17, 18 which has two open ends 26 and 51, i.e. the cylinder 17 is open in the non-activated state which is important for its function. Thus, cylinder 17 has an outflow opening which is open in the non-activated state, contrary to claim 1. Moreover, the cylinder 17 does not contain highly pressurized fluid but only air under atmospheric pressure, also contrary to claim 1.

Furthermore, claim 1 recites that the piston on activation of the gas generator and when the outflow opening has been opened, is moved by a pressure prevailing in the second chamber from a predetermined initial position (AP) in a

(EP) in which a volume of the first chamber is significantly reduced compared with a start volume of the first chamber.

Nagashima does not disclose a gas generator which comprises a container in which a piston is displaceably arranged, wherein the piston is displaced by the highly pressurized fluid which already was within the container in the non-activated state. The piston-cylinder unit according to Nagashima is completely different from the gas generator arrangement recited in claim 1. Thus, claim 1 should be allowable.

Claims 2-16 depend from claim 1 and are allowable over the prior art for the same reasons as claim 1 and for the specific limitations recited therein.

Claims 2-9 and 16-19 have been rejected under 35 USC 103(a) as being unpatentable over Nagashima.

It is respectfully submitted that to establish obviousness of a claimed invention, the prior art reference or references when combined must teach or suggest all the claim limitations. In addition, there must be some suggestion or motivation to a person having ordinary skill in the art to modify the reference or to combine reference teachings (MPEP §706.02(j)).

The patent to Nagashima does not disclose that the end volume of the first chamber in the end position (EP) of the piston is reduced by more than 50 % compared with the start volume of the first chamber in the initial position (AP) of the piston and including all the limitations of claim 1

The patent to Nagashima does not disclose that the piston consists of plastic and including all the limitations of claim 1. Thus, claim 3 should be allowable.

Regarding claims 4-7, the patent to Nagashima does not disclose that the piston is fixed in the initial position (AP) by at least one spring, that at least one spring is provided in the first chamber, that at least one spring is provided in the second chamber, and that at the at least one spring consists of plastic and including all the limitations of claim 1. Thus, claim 7 should be allowable.

The office action proffers in items 12-14 that a spring and a lever system are equivalent structures. The lever system with rod 46, rotary arm 41 and valve stem 47 is for transmitting the movement of the piston to the outside of the cylinder, more precisely to the valve 12 outside the cylinder. The lever system has no flexibility, it does not compress because it is the object of Nagashima to provide for an immediate emergency activation of the valve. Thus, the object of Nagashima would exclude usage of a spring, as recited in the present claims or any type of compressive flexible part between valve and the piston since the activation time would slow. Thus, claims 4-7 should be allowable.

The patent to Nagashima does not disclose that at the shutter opening is closed by a bursting membrane before the gas generator is activated. It is not a rearrangement of parts to provide a rupture disk at the piston as Nagashima disclose a piston-cylinder unit 17, 18 with all openings 26,

50, 51 being open and not covered at all points during and before use. Thus, claim 8 should be allowable.

The patent to Nagashima does not disclose that at least two pistons, coupled by at least one spring, are provided in the container and including all the limitations of claim 1. It is not routine skill in the art to provide two displaceable pistons within a pressurized fluid container. The two pistons which are coupled by at least one spring are, therefore, displaceable relative to each other in the non-activated state of the gas generator which is neither known from Nagashima (piston 18 has a fixed position in the non-activated state) nor from the patent to Allard. Thus, claim 9 should be allowable.

The patent to Nagashima does not disclose that the shutter opening has a smaller cross-section than the outflow opening and including all the limitations of claim 1. Thus, claim 10 should be allowable.

Claim 11 has been rejected under 35 USC 103 as being unpatentable over Nagashima in view of Allard (5,301,979).

The combination of Allard and Nagashima do not disclose that in the container a diffuser is provided, which defines an outlet space situated in the container, the diffuser having at least one first and one second through-flow opening arranged at different axial positions and the diffuser projecting into the shutter opening. The patent to Allard does not suggest to provide a diffuser IN the container. The diffuser openings 40 are outside of the container, i.e. The diffuser part is not

not disclose a diffuser projecting into the shutter opening.

Thus, claim 11 should be allowable.

The indication that claims 12-14 would be allowed if rewritten in independent form is acknowledged with appreciation.

Claim 15 has been amended to overcome the rejection under 35 USC 112, second paragraph. The term "pushed to block" has been deleted and the term "completely compressed" has been added. The term "pushed to block" is a technical term for a spring which has been completely compressed until adjacent coils abut against each other. Claim 15 is also allowable over the patent to Nagashima.

The patent to Nagashima does not disclose that in the end position (EP) the piston hits an end wall of the container and including all the limitations of claim 1. Thus, claim 16 should be allowable.

Claim 17 is directed to a method of operating a gas generator comprising a container filled with a pressurized fluid and having an outflow opening, and a piston which is displaceably arranged in the container and has a shutter opening dividing the container into a first chamber and a second chamber, the first and second chambers being filled with the fluid, the piston on activation of the gas generator and when the outflow opening has been opened, being moved by a pressure prevailing in the second chamber from a predetermined initial position (AP) in a direction towards the outflow

start volume of the first chamber, the method comprising the step of opening the outflow opening in a first step, moving the piston in a second step from a predetermined initial position (AP) in a direction towards the outflow opening (16) into an end position (EP), so that it assists the fluid (14) situated in the first chamber (24) in escaping, the movement of the piston (20; 120) significantly reducing the start volume of the first chamber (24).

The patent to Nagashima does not disclose or suggest all of the features of the method according to claim 17 since the structural differences result in a method of operation which is not similar to the steps recited in claim 17.

Claims 18-19 depend from claim 17 and are patentable over the prior art for the same reasons as claim 17 and for the specific limitations recited therein.

The patent to Nagashima does not disclose or suggest that the piston has a shutter opening which before activation of the gas generator is closed by a bursting membrane which only bursts when the piston has taken up the end position (EP) and including all the limitations of claim 17. Thus, claim 18 should be allowable.

The patent to Nagashima does not disclose or suggest that the start volume of the first chamber is reduced by at least 50 % through the movement of the piston from the initial position (AP) into the end position (EP) and including all the limitations of claim 17. Thus, claim 19 should be allowable.

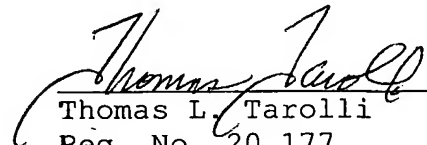
In view of the foregoing it is respectfully submitted

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allowance, and allowance of the above-identified application is respectfully requested.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,


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